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ABSTRACT

To ensure that faculty salaries are based solely upon the contributions and accomplishments of the individual faculty members at the University of Maryland at College Park, the relationship between male and female faculty salaries was monitored. Female faculty members' salaries for 1990 were reviewed in relation to the salaries of comparably situated men. Salary data used in the review included scattergrams; rosters of faculty, including salaries and years since highest degree; and tables of salaries of newly hired and newly promoted faculty. Statistical analyses were performed comparing the actual salaries of women faculty with salaries predicted on the basis of male faculty members' salaries. Salary adjustments were recommended by review committees for 27 women and 4 men. Appendixes contain a description of the salary-setting process at the University of Maryland, the statistical study design, the units reviewed within each college or school, the linear regression methodology, and women's salary differences. (Six differences) (JDD)

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FY 90 FACULTY SALARY REVIEW

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FY 90 Faculty Salary Review

Summary

The University of Maryland at College Park is committed to ensuring that faculty salaries are based solely upon the contributions and accomplishments of the individual faculty members. In order to be certain university policies in this area are being reflected in individual salary actions, the Vice President for Academic Affairs has monitored the relationship between male and female faculty salaries.

In 1990, as in prior years, female faculty members' salaries were reviewed in relation to the salaries of comparably situated men. The reviews were conducted by college review committees appointed by the deans. The purpose of these reviews is to examine the current salary of tenure-track female faculty members and to recommend to the deans individual adjustments, if warranted, on the basis of the woman's merit in comparison to that of similarly situated male colleagues. In addition, if a committee determines that a male faculty member's salary should be increased relative to that of similarly situated faculty, then such an increase also is recommended. Committee recommendations were reviewed by the deans at the same time they reviewed departmental recommendations. The deans' salary recommendations were reviewed by the Vice President for Academic Affairs and finally approved by the President for inclusion in the annual Campus Working Budget.

The Office of Institutional Studies provided several kinds of faculty salary data to assist the college review committees. These included scattergrams; rosters of faculty, including salaries and years since highest degree; and tables of salaries of newly hired and newly promoted faculty. In addition, statistical analyses were performed comparing the actual salaries of women faculty with salaries predicted on the basis of male faculty members' salaries. A linear regression method was used to perform the analyses.

Following the review of faculty salaries, adjustments were recommended by college salary review committees for a total of 27 women and 4 men. Some of the recommendations were larger than, some smaller than, and some equal to the department chairs' recommendations. Special merit adjustments were awarded to 20 women and 2 men. These special merit adjustments were increases that were (1) recommended by the college salary review committee and (2) greater than the chair's recommended increase. Women received special merit adjustments totaling $36,560; men received special merit adjustments totaling $1,911.

FY 90 Faculty Salary Review

The University of Maryland at College Park is firmly committed to ensuring that faculty salaries in each discipline and profession are based solely upon the qualities and accomplishments of the individual faculty members. Sex should not have a bearing on salary levels. In order to be certain university policies in this area are being reflected in individual salary actions, the Vice President for Academic Affairs has monitored the relationship between male and female faculty salaries. (See Appendix A for a description of the salary-setting process at the University of Maryland at College Park.)

As part of this regular monitoring, in 1980 the Office of Institutional Studies began a series of statistical studies that attempted to identify aggregate differences between women's actual salaries and those predicted on the basis of men's salaries, yearly trends in these differences, and some factors responsible for annual changes in differences. (See Appendix B for a description of the statistical study design.) The studies, however, could not identify whether any individual woman's salary was unjustifiably below those of comparably situated men nor whether any salary difference was based all or in part on discrimination.

Following the 1981 study, an annual process was established for reviewing female faculty members' salaries in relation to the salaries of comparably situated men. This annual individual review process establishes the extent to which any salary differences that appeared in the statistical studies were or were not justifiable and provides a basis for making specific salary-level changes. Statistical differences by themselves do not necessarily imply inequity. Consequently, the individual review is the fundamental analysis of female salary equity conducted by UMCP.

Salary Review Process

The annual salary equity review process is designed to be a part of the regular annual salary review used to award merit increases. Funding for merit salary increases is allocated to each of the 14 UMCP colleges and schools, which in turn further allocate the funds to their departments. The head of each department makes merit salary increase recommendations to the college or school deans who then forward their recommendations to the Academic Vice President.

College Salary Review Committees (CSRCs)

Annually, before merit salary decisions are made, each of the deans appoints a committee of five senior faculty members for the purpose of reviewing the productivity and salary of female faculty members in the college or school. Of the five members, at least two are women. As salaries of faculty from a specific department are reviewed, two senior faculty members from that department join the committee as consultants; they are replaced when the review of their department is completed. These departmental representatives are not voting members. Committee members do not attend sessions in which their own salaries are being considered. Department chairs are not permitted to serve on review committees, although they may be consulted in the course of the review process.

For the four nondepartmentalized colleges (College of Journalism, College of Library and Information Services, School of Architecture, and School of Public Affairs), the 1990 reviews were conducted by a committee reporting to the Vice President for Academic Affairs. One committee reviewed faculty in the Colleges of Agriculture and of Life Sciences. Thus 10 review committees were appointed.

The Vice President for Academic Affairs established the following timetable for the 1990 college salary reviews:

February 21, 1990	The Vice President for Academic Affairs notifies the deans of the 1990 salary review schedule.
March 2, 1990	The deans forward to the Vice President for Academic Affairs the membership of the College Salary Review Committees, including departmental consultants.
March 2, 1990	The Vice President for Academic Affairs meets with the chairs of the 1990 review committees.
March 7 - April 12, 1990	The committees review salaries.
April 13, 1990	The committees submit salary recommendations to the deans.
April 20, 1990	The deans forward salary reports to the Vice President for Academic Affairs.

Process of Review

The purpose of this college-level committee review was to examine the current salary of tenure-track female faculty members and to recommend to the dean individual adjustments, if any were warranted, on the basis of the woman's merit in comparison with that of similarly situated male colleagues. For purposes of this review, "similarly situated" means the same department, the same rank, and approximately the same number of years since obtaining the highest degree. The dean was responsible for the determination of the comparison group. Any modification of the group the dean selected had to be explained in the salary review committee's report to the dean.

Beginning in FY 86, the procedure for reviewing the salaries of women was modified. As a result of a recommendation by the Faculty Equity Issues Committee of the Chancellor's Commission on Women's Affairs (Chancellor's Commission on Women's Affairs, 1985), only selected women were included in a given year's salary reviews, with all tenure-track female faculty members being reviewed at least once in every three-year period. The principal

reason for changing the procedure is that the time required for the review committees to complete their work is substantial; therefore, reducing the number of women to be reviewed enabled the committees to study more thoroughly the materials of those being reviewed. The groups reviewed in FY 90 were the following: tenure-track female faculty members appointed between October 1, 1988 and September 30, 1989; tenure-track female faculty promoted for the 1989-90 academic year; faculty members for whom salary adjustments were recommended by the 1989 CSRCs who did not receive the full amount recommended;[1] and tenure-track female faculty in units selected by the dean.

FY 90 was the second year of the second three-year cycle of reviews. All tenure-track women faculty will be reviewed at least once in the period 1989 to 1991. The units reviewed in 1989 and in 1990 are given in Appendix C.

Each woman being reviewed and those men who were selected as "similarly situated" were requested to provide a current curriculum vitae for the committee's use. The committee then examined the appropriateness of each faculty member's salary, taking into account her or his overall productivity, and especially the level of productivity for the current year. All the factors that the department considered important and the relative weights attached by the department to research and scholarly productivity, teaching effectiveness, and public service were taken into account. The committee considered as well any other relevant factors, such as the employment market conditions affecting a particular discipline or subdiscipline.

This review process was focused primarily on the equity of female faculty salaries. The possibility existed, however, that the committee might identify a male faculty member whose salary was not equitable in terms of those of similarly situated faculty. If the committee, as a result of its review of faculty merit, determined a male faculty member's salary should be

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[1]If the amount received was less than the amount recommended by the CRSC, but within $150 of the amount recommended, no review was conducted.

increased relative to that of similarly situated faculty, then such an increase also was recommended. After considerations of merit were made, the committee recommended to the dean where a given woman's salary should stand relative to her male comparison group.

In the departmentalized colleges, committee recommendations for changes in relative female or male faculty salary levels, if any, were reviewed by the deans at the same time they reviewed departmental recommendations. If department chairs' recommendations differed from those of the committee, the dean resolved these differences, redistributing salary increases when appropriate, to make all adjustments within the college's total merit salary allocation. The review in the College of Business and Management functioned as in the departmentalized colleges. The reviews for the College of Journalism, the College of Library and Information Services, the School of Architecture, and the School of Public Affairs were conducted by a committee reporting to the Vice President for Academic Affairs. Committee recommendations for changes in relative female or male faculty salary levels were reviewed by the Vice President. If the deans' recommendations differed from those of the committee, the Vice President resolved these differences. The salary recommendations for all colleges and schools were reviewed by the Vice President for Academic Affairs and finally approved by the President for inclusion in the annual Campus Working Budget.

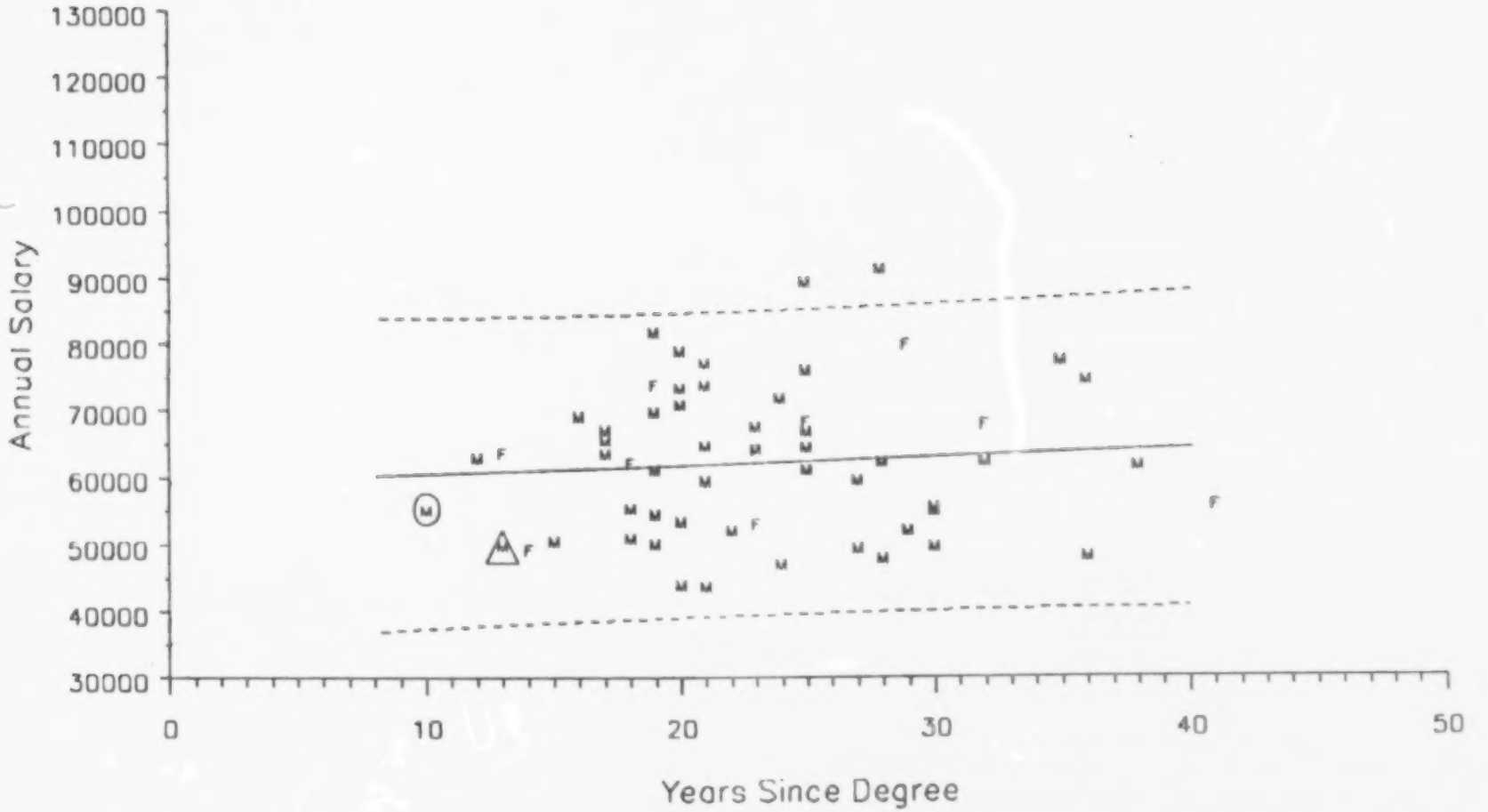
Data Resources

To assist the college salary review committees, the Office of Institutional Studies provided several kinds of faculty salary data. Departmental rosters of faculty were prepared that included each faculty member's name, rank, sex, level and date of highest earned degree, and current salary.

In order to present a complete picture of the relation of each individual's salary and years since doctorate to those of other faculty in the department, a number of scattergrams were prepared. (See Figure 1 for an example of a scattergram.) The scattergrams generally

Figure 1

Example of a Scattergram
of Faculty Salary Data



Circle = New, Triangle = Promoted
Square = Received less than CSRC recommended

grouped doctorate-holding faculty on the basis of UMCP's organizational structure. (For detailed information on the groupings, see Appendix D.) Two sets of scattergrams were produced for each CSRC. One set of scattergrams depicted the relationship between salary and number of years since the doctorate, with a separate scattergram for each rank within each academic grouping. The second set depicted the relationship between salary and number of years in rank for each professor (and separately for each associate professor) who was promoted to that rank (not hired in rank).

The first set of scattergrams included lines representing the linear regression relationship between salaries and years since degree for the men with doctorates in the particular academic grouping and rank. The method used in 1989 for calculating the equations of these lines is described in Appendix D.

Tables were provided to the CSRCs concerning salaries of all newly hired and newly promoted faculty. For newly hired faculty members, the tables provided for each college and school and rank, the names, sex, Fall 1989 salaries, starting dates, numbers of years since the doctorate for those with doctorates, and departments. The tables also indicated the mean salary by sex and rank for the newly hired faculty in each college or school.

For newly promoted faculty members, the tables presented for each college or school and rank, the names, sex, October 1988 and October 1989 salaries, percentage changes in salary, numbers of years since the doctorate for those with doctorates, and departments. The tables also indicated the average percentage increases by sex and by rank for the newly promoted faculty in each college or school.

In addition, the colleges and schools received scattergrams that identified the data points for the newly hired and newly promoted faculty with doctorates, and for the faculty who did not receive the full special merit adjustment recommended by the 1989 CSRCs.

Statistical Analyses

Preliminary to the deliberations of the salary review committees, the Office of Institutional Studies prepared a statistical analysis of current faculty salaries. As described above, this study compared the actual salaries of female faculty with salaries predicted on the basis of male faculty salaries. Although the salary reviews include a select group of somewhat more than one third of the women professorial faculty in a given year (and all women professorial faculty over a period of three years), the statistical analyses include nearly all members of the study population each year. (See Appendix D for a tabulation of excluded cases.) Information concerning the research questions addressed by the study, as well as the population, data sources, and possible variables selected for the study can be found in Appendix B.

Statistical method. Linear regression was used to analyze the data. Based on data for men in the academic grouping, linear regression equations were calculated for each rank separately within each of 15 academic groupings. (A list of the academic groupings and a description of the linear regression methodology can be found in Appendix D.)

Statistical findings. Results of the salary analysis using the linear regression methodology are detailed in Appendix D. For the 204 women included in the analysis of the total population in 1989, total actual salaries were $31,607 less than those salaries predicted using the men's regression equations. Women's total actual salaries had been $56,127 more than their total predicted salaries in 1988. For the 156 women in the constant group (those faculty who were in the study population in 1988 and 1989 and did not change their status), total actual salaries were $34,887 more than predicted in 1989; in 1988 total actual salaries had been $421 less than predicted. (See Table D-1.)

Table D-2 shows the breakdown by rank. In 1989, in the total group and in the constant group women's total actual salaries were smaller than their predicted salaries at the rank of

professor but were larger than their predicted salaries at the ranks of associate and assistant professor. Because women professors had relatively large salaries, their salary differences (which were large and positive) had a greater impact on the total salary difference than on the percentage salary difference. As a consequence, although the total salary difference was positive (i.e., total actual salaries were less than predicted), the average percentage salary difference for all women in the total group was negative. On average, women received 0.2 percent more than their predicted salaries. (See Appendix D for an explanation of these results.)

Note that certain ranks within academic groupings included too few men to develop prediction equations. The data for the women in these academic groupings were not included in this analysis. In addition, seven men were omitted from the 1989 total group and six men were omitted from the 1988 and 1989 constant group data sets used in developing the prediction equations because they were statistical outliers. A small number of women were excluded because their "years since degree" were more than two years beyond the limits of the men's data.

Results of the College Salary Reviews

Following their review of faculty salaries, adjustments were recommended by CSRCs for a total of 27 women and 4 men. As indicated above, the CSRCs' recommendations were relative recommendations; that is, a given female faculty member's salary was recommended to be some percent more or less than that of some similarly situated male colleague. This would be translated into a dollar figure once the department chair's recommendation for the colleague was known, and that dollar figure could then be compared with the increment the chair had recommended for the female faculty member. Some of the CSRCs' recommendations were larger than, some smaller than, and some equal to the chairs' recommendations. Salaries finally approved by the dean sometimes equaled the CSRC's

recommendation, the chair's recommendation, or neither amount. Occasionally the approved increase was greater than either recommendation.

A "special merit adjustment" is defined as the salary increase recommended by the CSRCs and approved by the dean that exceeded the recommendation of the department chair. Five adjustments recommended by the CSRCs became unnecessary when the standard salary procedure (chair's recommendation) provided at least as great an increment. In four cases, the dean decided that a special merit adjustment, although recommended by the CSRC, was inappropriate. The remaining faculty for whom the CSRCs recommended salary adjustments received special merit adjustments. Table 1 gives the numbers in each category. Special merit adjustments by college or school, sex, and rank are presented in Table 2.

A total of 20 women and 2 men received $38,471 in special merit adjustments. The statistical study indicated that total female faculty salaries in FY 90 were $31,607 less than those predicted from men's salaries. The case-by-case review resulted in a total special merit adjustment to women's salaries of $36,560, of which $29,126 was awarded to women with doctorates who were in the study population. Female gains, however, can be expected to be somewhat greater than this because recommendations of the department chairs are not considered special merit adjustments. As Table 1 shows, four of the CSRCs' recommendations for women were equaled or exceeded by the department chairs' recommendations.

Whether a difference between actual and predicted salaries still remains and, if so, its extent can only be determined by the statistical studies done in preparation for the FY 91 faculty salary review.

Finally, it should be noted that the individual case reviews conducted by the CSRCs demonstrate that statistical differences are not evidence of gender-based considerations.

Table 1

Numbers of Faculty Recommended for and Receiving Special Merit Adjustments[a]

	Women	Men	Total
Number recommended for special merit adjustments by CSRCs	27	4	31
Number for which chairperson's recommendation equaled or exceeded the CSRC's recommendation	4	1	5
Number for which the Dean decided a special merit adjustment was inappropriate	3	1	4
Number receiving special merit adjustments	20	2	22

[a]Includes faculty with and without earned doctorates.

Table 2

Summary of Special Merit Adjustments by College or School, Sex, and Rank

College or School	Sex	Rank	Number Receiving Special Merit Adjustments	Total Amount of Special Merit Adjustments
Agriculture			0	
Architecture			0	
Arts and Humanities			11	$24,295
	W	Professor	2	3,929
	W	Associate	6	16,050
	W	Assistant	3	4,316
Behavioral and Social Sciences			6	7,308
	W	Professor	1	1,611
	W	Associate	4	4,626
	W	Assistant	1	1,071
Business and Management			0	
Computer, Mathematical, and Physical Sciences			0	
Education			5	6,868
	W	Professor	1	1,708
	W	Assistant	2	3,249
	M	Assistant	2	1,911
Engineering			0	
Health and Human Performance			0	
Human Ecology			0	
Journalism			0	
Library and Information Services			0	
Life Sciences			0	
Public Affairs			0	
Total Campus			22	$38,471
By Sex	W		20	36,560
	M		2	1,911
By Sex and Rank	W	Professor	4	7,248
	W	Associate	10	20,676
	W	Assistant	6	8,636
	M	Assistant	2	1,911

There may always remain some varying and random statistical difference between any two populations of employees that cannot be predicted or explained with any statistical model.

Appendix A

Background

Organization of UMCP

The University of Maryland at College Park is organized into 12 colleges and 2 schools. All of the teaching faculty are employed in the colleges and schools.

Staff services and campus-wide coordination of academic policy and faculty review are provided by the Vice President for Academic Affairs and Provost. Figure A-1 provides an organization chart of the academic units of the Campus.

Faculty Salary Determination

Recommendations on faculty salaries originate in the departments. Initially, salary recommendations are made by the department chairperson or by a departmental committee and the chairperson. These recommendations are reviewed at higher levels. The departments, colleges, and schools have considerable autonomy in the recruitment and review of the performance of their faculty, although a veto over specific actions and policies is held by higher-level administrators.

The University of Maryland does not have a set salary scale for its faculty. Salaries vary considerably across departments based on conditions in the faculty marketplace and evaluations of faculty quality, as well as legislative appropriations. Three important times when salary determinations are made are initial appointment, periodic salary increases, and academic promotion.

Salary established at initial appointment. The recommended salary for a faculty member at the time of initial appointment is determined through negotiation between the department and the prospective faculty member. The salaries offered to new faculty are

Figure A-1

UNIVERSITY OF MARYLAND AT COLLEGE PARK
ORGANIZATION CHART

Part B: ACADEMIC

Vice President for Academic Affairs and Provost

College of Agriculture

- Agricultural Engineering
- Agricultural and Extension Education
- Agricultural and Resource Economics
- Agronomy
- Animal Sciences
- Horticulture
- Institute of Applied Agriculture
- Poultry Science

Virginia-Maryland Regional College of Veterinary Medicine

School of Architecture

College of Arts and Humanities

- American Studies
- Art
- Art Gallery
- Art History
- Center for Studies in 19th Century Music
- Center for Mediterranean Archaeology
- Center for Renaissance and Baroque Studies
- Classics
- Communication Arts and Theatre
- Comparative Literature Program
- Dance
- English
- French and Italian Languages and Literatures
- Germanic and Slavic Languages and Literatures
- Hebrew and East Asian Languages and Literatures
- History
- Housing and Design
- Jewish Studies Program
- Language Media Center
- Linguistics Program
- Maryland English Institute
- Music
- Philosophy
- Spanish and Portuguese Languages and Literatures
- Women's Studies Program

College of Behavioral and Social Sciences

- Afro-American Studies Program
- Anthropology
- Bureau of Business and Economic Research
- Center for International Development and Conflict Management
- Computer Laboratory
- Economics
- Geography
- Government and Politics
- Hearing and Speech Sciences
- Industrial Relations and Labor Studies Center
- Institute of Criminal Justice and Criminology
- Institute for Urban Studies
- Psychology
- Sociology
- Survey Research Center

College of Business and Management

- Center for Productivity and Quality of Working Life

College of Computer, Mathematical, and Physical Sciences

- Applied Mathematics
- Center for Automation Research
- Center for Super Conductivity Research
- Chemical Physics Program
- Computer Science
- Geology
- Institute for Advanced Computer Studies
- Institute for Physical Science and Technology
- Laboratory for Plasma and Fusion Energy Studies
- Mathematics
- Meteorology
- Physics and Astronomy

College of Education

- Center for Educational Research and Development
- Center for Postsecondary Governance and Finance
- Counseling and Personnel Services
- Curriculum and Instruction
- Curriculum Laboratory
- Education Policy, Planning and Administration
- Educational Technology Center
- Human Development
- Industrial, Technological and Occupational Education
- Measurement, Statistics and Evaluation
- Office of Laboratory Experiences
- Special Education

College of Engineering

- Aerospace Engineering
- Center for Minorities in Science and Engineering
- Chemical and Nuclear Engineering
- Civil Engineering
- Electrical Engineering
- Engineering Cooperative Education
- Engineering Research Center
- Fire Protection Engineering
- Instructional Television System
- Mechanical Engineering
- Systems Research Center
- Transportation Studies Center
- Wind Tunnel

College of Human Ecology

- Family and Community Development
- Human Nutrition and Food Systems
- Textiles and Consumer Economics

College of Journalism

College of Library and Information Services

College of Life Sciences

- Botany
- Chemistry and Biochemistry
- Entomology
- Marine and Estuarine Environmental Studies Program
- Microbiology
- Water Resource Research Center
- Zoology

College of Physical Education, Recreation, and Health

- Center on Aging
- Health Education
- Physical Education
- Recreation

School of Public Affairs

- Bureau of Governmental Research
- Center for International Security Studies
- Institute for Philosophy & Public Policy

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reviewed and approved by deans and the Academic Vice President and, at senior ranks, by the President.

Periodic salary increases. Cost-of-living increases are typically distributed by the state as a percentage increase for all state employees, including faculty. The size of cost-of-living increases usually is specified in the annual appropriation to the university. Periodically, nearly always annually, faculty salaries are reviewed to reward merit. Merit increases are awarded on the basis of departmental faculty committee and/or departmental chair's recommendations that are reviewed and approved by the deans, Academic Vice President, and President. The size of individual merit increases is influenced by the total funds available to UMCP for this purpose, the allocation of funds among the colleges, schools, and departments, and the departmental recommendations regarding each individual.

Academic promotion. Promotion and tenure decisions affect salaries because salaries are larger at the higher ranks. A study (Office of Institutional Studies, 1984) of promotion and tenure decisions at UMCP found no significant differences in the promotion and tenure rates of male and female faculty.

Appendix B

Statistical Study Design

Research Questions

The research questions are the following:

Are there substantial differences between the salary levels of male and female faculty in homogeneous groups, taking into account rank and years since award of the doctorate?

If such differences exist, can specific areas be identified as areas to be examined for possible inequities?

Have such differences changed between Fall 1988 and Fall 1989?

Population

The study group includes all Fall 1989 UMCP full-time instructional and research faculty who possess a doctorate and hold the rank of professor, associate professor, or assistant professor. Administrators such as deans, associate and assistant deans, department chairs, and certain directors are omitted from the analysis. Additionally, faculty on leave without pay in Fall 1989, visiting faculty, and those in nontenure-track positions are excluded. The population was defined as of September 30, 1989 to maintain comparability with previous studies.

Data Sources

Salary and other pertinent data were obtained from the "frozen" Fall 1989 personnel data bases and from records of the Personnel Services Department. Material in a large number of personnel folders was reviewed in order to determine correct salary and degree data. Data for the total group for 1988 are based on the same data as in the FY 89 report.

Selection of Variables

The variables that might be included in an analysis of faculty salary levels can be grouped into those related to: (1) the level and years of experience of the individual; (2) the individual's scholarly achievement, including the attainment of tenure and promotions; (3) the field of expertise of the individual, as reflected, for example, in the departmental affiliation; and (4) personal and cultural characteristics, such as gender and career expectations (Office of Institutional Studies, 1982). The literature on the use of regression analysis in sex salary difference studies indicates that independent variables other than years since highest degree, rank, academic unit, and sex improve prediction accuracy only slightly. Inclusion of predictor variables such as publications, type of publications, years employed at the institution, number of Ph.D. graduates produced, and transformed variables have been shown to have had little effect on improving the accuracy of prediction. This phenomenon may occur because the largest group in the study, white males, has relatively uniform characteristics and a few characteristics, suggesting intercorrelations, may indirectly predict others (Gray & Scott, 1980).

It is commonly found that "faculty rank is the most important determinant in predicting relative amounts of salary" (McLaughlin, Montgomery, & Mahan, 1979). Therefore, a different distribution of men and women among the ranks, as one would expect strictly on the basis of the increasing proportion of women among doctoral degree recipients in recent years, would cause a differential in the average salaries of men and women. Because there is no significant difference in the promotion rates of men and women at UMCP (Office of Institutional Studies, 1984), rank is a legitimate variable to include in this study.

In practice, no one is ever sure all significant variables are included in an analysis. Further, the quality of the individual's achievement is best evaluated by other scholars in the field and is not amenable to statistical treatment based on quantitative measures such as

number of publications, and so forth. Therefore, any conclusions drawn from a statistical study of salary levels of male and female faculty are, to a considerable degree, tenuous. This statistical study's primary value is to guide more detailed examination of individual faculty salaries and to gauge trends.

Appendix C

Units Reviewed in 1989 and in 1990

College or School	Units Reviewed in 1989	Units Reviewed in 1990
Agriculture	Agricultural and Extension Education	Agronomy Animal Sciences Poultry Science
Architecture	Entire unit	
Arts and Humanities		Classics French and Italian Germanic and Slavic Hebrew and East Asian Music Spanish and Portuguese
Behavioral and Social Sciences	Economics Government and Politics Hearing and Speech Sciences	Anthropology Psychology
Business and Management	Management and Organization	Marketing
Computer, Mathematical, and Physical Sciences	Geology Physics and Astronomy	Mathematics
Education	Curriculum and Instruction Human Development Special Education	Counseling and Personnel Services Industrial, Technological, and Occupational Education Measurement, Statistics, and Evaluation
Engineering	Entire unit	
Health and Human Performance		Health Education Recreation
Human Ecology	Human Nutrition and Food Systems	Family and Community Development
Journalism	Entire unit	
Library and Information Services		
Life Sciences	Botany Zoology	Chemistry and Biochemistry Entomology
Public Affairs		Entire unit

Appendix D

Linear Regression Analysis

Academic Groupings

The academic groupings used in this analysis are the following:

College of Agriculture

College of Arts and Humanities

College of Behavioral and Social Sciences, excluding

Department of Economics

Department of Economics

College of Business and Management

College of Computer, Mathematical, and Physical Sciences, excluding

Department of Computer Science

Department of Computer Science

College of Education

College of Engineering

College of Health and Human Performance

College of Human Ecology

College of Journalism

College of Library and Information Services

College of Life Sciences

School of Architecture

School of Public Affairs

Linear Regression Methodology

Linear regression was used to analyze the data. Regression equations were calculated for

each rank separately within each of 15 academic groupings,[2] based on the data for men in the unit. As in the previous faculty salary studies, the 10-month salary for each female faculty member was compared with the men's regression equation for men in her academic grouping and rank to determine how far, and in which direction, her salary deviated from that predicted by the equation. The equation for each academic grouping/rank had the following form:

$S = B_0 + B_1(YSD)$, where

S = Salary (dependent variable)

B_0 = Intercept

B_1 = Independent variable regression coefficient

YSD = Years since receiving the doctoral degree.

For each woman a salary difference was calculated as the difference between her actual salary (on a 10-month basis) and the salary predicted from the men's regression equation for a person in her academic grouping and rank, and with the same number of years since the doctorate. A total salary difference was then calculated for every academic grouping and rank. There were 204 women and 1,040 men in the study population in Fall 1989.

In order to isolate changes that result from the annual review process, a similar process was carried out for those faculty who did not change their faculty status between Fall 1988 and Fall 1989. These are the faculty who were in the study population both years (i.e., full-time faculty, nonadministrative, not on leave without pay) who were not promoted in 1989 and who did not change departments. Faculty who left the university in 1988-89, or who were

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[2]Data for the School of Architecture were separately reviewed. In addition, six academic grouping/ranks had too few men to develop prediction equations. Seven men were omitted from the data sets used in developing the Fall 1989 total group prediction equations because they were statistical outliers. Furthermore, a number of women had "years since degree" more than two years beyond the range for men in their academic grouping and rank. Therefore the number of faculty in the total group analysis was reduced to 204 women and 1,040 men; the number in the constant group analysis was reduced to 156 women and 914 men.

newly hired at one of the professorial ranks between October 1, 1988 and September 30, 1989 were excluded from this "constant group."

The male and female faculty in the constant group were identified (914 men and 156 women) and the same form of regression analysis was used to calculate total salary differences for women as was used in the total faculty group. The results of the constant group analysis show more clearly the changes occurring as a result of the annual salary review process (including special merit adjustments awarded to women).

Data Analysis and Statistical Findings

Statistical outliers. In FY 90 the statistical analysis identified certain men's data points as statistical outliers. Seven outliers were identified for and excluded from the 1989 total group. Six of these seven outliers were then excluded from the constant group for 1988 and 1989. One of the outliers was a new faculty member and thus was not part of the constant group.

All academic grouping/ranks that included 10 or more men were tested for outliers. Ten was selected because removing a data point from a grouping smaller than 10 would have too great an influence on the data set for men. There were two criteria for identifying outliers. A man's data point was identified as an outlier if it met either criterion.

The first criterion was Cooke's D (Cooke, 1977), a measure of the influence of a data point on the regression intercept and slope. A significance level of $p < .05$ was used for this statistic. The second criterion was a t-type statistic that determined whether the man's data point was significantly different from the other men's data points with respect to the number of years since the doctorate (YSD). A significance level of $p < .01$ was used for this statistic, so that the likelihood that such a difference resulted from chance was small. The outliers

identified by this criterion were cases in which a man's YSD was significantly larger than the mean YSD of the other men in his academic grouping/rank.

This procedure resulted in the identification of seven men's data points in the total group as outliers. There were two such data points in the College of Agriculture at the rank of assistant professor, and one in each of the following academic grouping/ranks: College of Arts and Humanities--associate professor; College of Behavioral and Social Sciences, excluding Economics--associate professor; College of Business and Management --assistant professor; College of Computer, Mathematical, and Physical Sciences, excluding Computer Science--assistant professor; and College of Engineering--assistant professor.

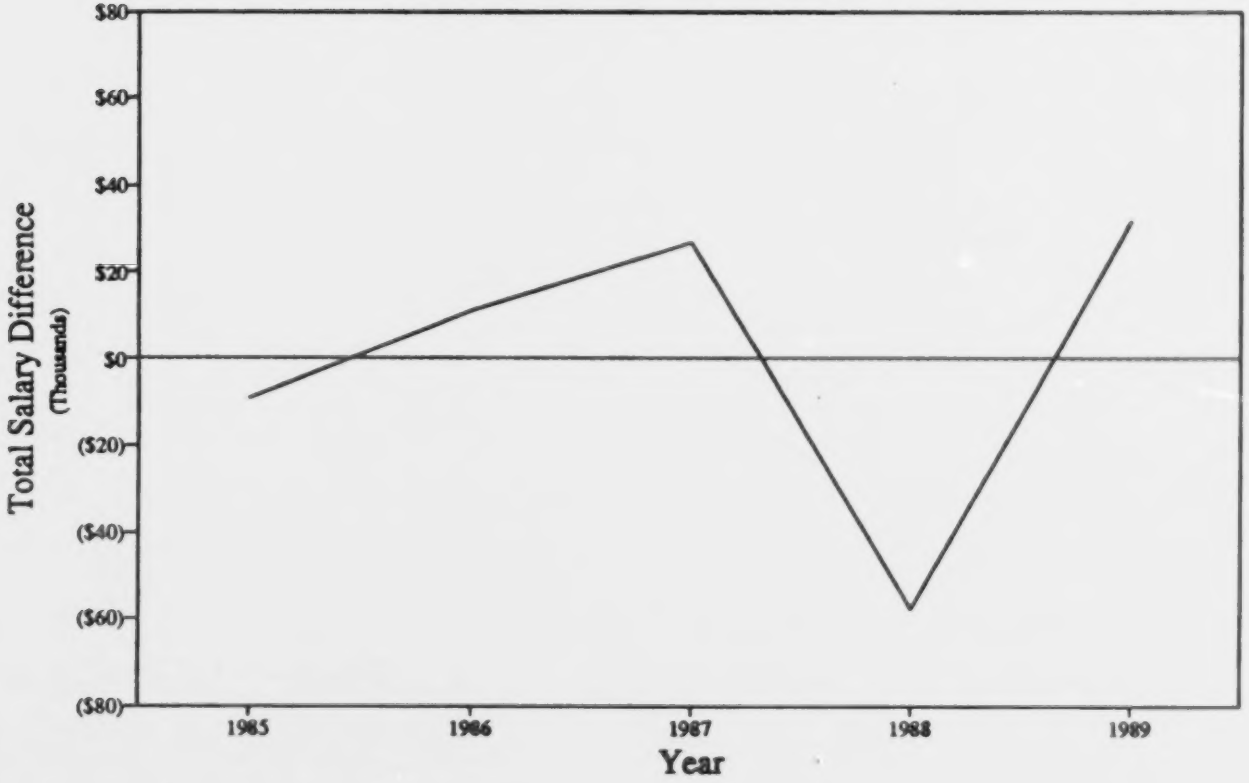
Campuswide salary differences, 1988 and 1989. Table D-1 displays in summary form the differences between women's salaries and the salaries predicted from the men's regression equations, both for the total population of the study and the constant group, by college. For the 204 women in the total group, women's actual salaries were $31,607 less than predicted from the men's regression equations in 1989. In 1988, women's actual salaries had been $56,127 more than their predicted salaries. For the 156 women in the constant group, women's actual salaries were $34,887 more than predicted in Fall 1989, and $421 less than predicted in Fall 1988.

Figure D-1 indicates the total salary difference for all women in the total group by year for 1985 through 1989. The total salary difference has fluctuated about zero over this period.

Table D-2 shows the salary differences by rank. In 1989, in the total group and in the constant group women's total actual salaries were smaller than their predicted salaries at the rank of professor but were larger than their predicted salaries at the ranks of associate and assistant professor.

For all ranks combined, women's total actual salaries were smaller than their predicted salaries for the total group but larger than their predicted salaries for the constant group in

Figure D-1
Total Salary Difference by Year



Note. Positive values indicate that women, on average, were paid less than predicted. Negative values indicate that women, on average, were paid more than predicted.

1989. In 1988, in the total group women's actual salaries were $56,127 more than their predicted salaries; in 1989, actual salaries were $31,607 less than predicted. This is an increase of $87,734 in the salary difference for the total group. In the constant group, women's actual salaries exceeded their predicted salaries by $34,887 in 1989 but were $421 less than their predicted salaries in 1988. This is a decrease of $35,308 in the salary difference for the constant group.

Average percentage salary differences. The average percentage salary differences for 1985 through 1989 are given by rank in Table D-3. On average, female faculty received 0.2 percent more than their predicted salaries in 1989. On average, in 1989 female professors received 2.7 percent less than predicted, female associate professors received 1.6 percent more than predicted, and female assistant professors received 0.4 percent more than predicted.

Although the total actual salaries for women were $31,607 less than their predicted salaries, the average percentage salary difference was -0.2 percent, indicating that, on average, women received 0.2 percent more than their predicted salaries. Although these results appear contradictory, they are not.

In the analysis for 1989, the total salary difference produced at the rank of professor was positive and relatively large. The total salary differences produced at the ranks of associate professor and assistant professor were negative and, added together, were smaller in magnitude than that for professors. The total salary difference for all ranks combined was positive (i.e., the total actual salaries were less than the predicted salaries) because it was just the sum of the salary differences for all three ranks. (See Table D-2).

Percentage salary differences are obtained by dividing the salary difference by the predicted salary for each woman. In other words, the salary difference is weighted inversely by the predicted salary. Thus for the same salary difference, the percentage salary difference

is smaller if the predicted salary is greater. Because female professors generally have larger predicted salaries than do female associate or assistant professors, large salary differences for professors will generally produce a smaller average percentage salary difference than the same salary differences would produce for less highly paid associate professors and assistant professors. The inverse weighting of the salary differences by the predicted salaries results in a reduction in the relative magnitude of professors' percentage salary differences compared to those at the other ranks.

When the percentage salary differences were added for all women and divided by the total number of cases to obtain the average for all ranks combined, the negative contributions exceeded the positive contributions and the average for all ranks combined was a negative percentage salary difference of -0.2 percent. (See Table D-3.)

Salary differences by academic grouping, total group. Salary differences by academic grouping for the total group in 1988 and 1989 are presented in Table D-4. There were seven academic groupings in which women's actual salaries were on average less than their predicted salaries for the total group in both 1988 and 1989. In 1989 there were decreases in the salary differences in two of these academic groupings (College of Computer, Mathematical, and Physical Sciences, in Computer Science; and School of Public Affairs). There were increases in the salary differences in five of these academic groupings (College of Agriculture; College of Behavioral and Social Sciences, excluding Economics; College of Computer, Mathematical, and Physical Sciences, excluding Computer Science; College of Engineering; and College of Journalism).

There were five academic groupings in which the total actual salary for women in the total group exceeded the total predicted salary in both 1988 and 1989. The amount by which actual salaries exceeded predicted salaries increased in 1989 in two of the academic groupings (College of Behavioral and Social Sciences, in Economics; and College of Health

and Human Performance). In three academic groupings (College of Arts and Humanities; College of Human Ecology; and College of Life Sciences), the amount by which actual salaries exceeded predicted salaries decreased in 1989.

In one academic grouping (College of Education), women's actual salaries exceeded their predicted salaries in 1988, but actual salaries were less than predicted salaries in 1989. In one academic grouping (College of Business and Management), women's actual salaries were less than their predicted salaries in 1988, but actual salaries were greater than predicted salaries in 1989. No salary difference was produced by the College of Library and Information Services because there were no women in the total group at the rank at which there was an adequate number of men for an analysis.

Salary differences by academic grouping, constant group. Salary differences by academic grouping for the constant group in 1988 and 1989 are presented in Table D-5. There were seven academic groupings in which women's actual salaries were on average less than their predicted salaries for the constant group in both 1988 and 1989. In 1989 there were decreases in the salary differences in four of these academic groupings (College of Agriculture; College of Engineering; College of Journalism; and School of Public Affairs). There were increases in the salary differences in three of these academic groupings (College of Business and Management; College of Computer, Mathematical, and Physical Sciences, excluding Computer Science; and College of Computer, Mathematical, and Physical Sciences, in Computer Science).

There were six academic groupings in which the total actual salary for women in the constant group exceeded the total predicted salary in both 1988 and 1989. The amount by which actual salaries exceeded predicted salaries increased in 1989 in five of these academic groupings (College of Arts and Humanities; College of Behavioral and Social Sciences, excluding Economics; College of Education; College of Health and Human Performance; and

College of Human Ecology). The amount by which actual salaries exceeded predicted salaries decreased in 1989 in one academic grouping (College of Life Sciences).

In one academic grouping (College of Behavioral and Social Sciences, in Economics), women's actual salaries exceeded their predicted salaries in 1988, but actual salaries were less than predicted salaries in 1989. No salary difference was produced by the College of Library and Information Services because there were no women in the constant group at the rank at which there was an adequate number of men for an analysis.

Table D-1

Women's Salary Differences, by College

College	Total Group 1988 Men N	Total Group 1988 Women N	Total Group 1988 Salary Difference	Total Group 1989 Men N	Total Group 1989 Women N	Total Group 1989 Salary Difference	Constant Group 1988 Men N	Constant Group 1988 Women N	Constant Group 1988 Salary Difference	Constant Group 1989 Men N	Constant Group 1989 Women N	Constant Group 1989 Salary Difference
College of Agriculture	92	6	$1,687	86	6	$31,652	82	5	$3,954	82	5	$2,417
College of Arts and Humanities	166	61	(53,104)[a]	171	68	(51,603)	149	53	(44,556)	149	53	(62,802)
College of Behavioral and Social Sciences	128	31	6,306	132	32	10,842	116	24	(2,733)	116	24	(4,033)
College of Business and Management	53	5	9,059	53	6	(1,347)	44	5	11,749	44	5	19,423
College of Computer, Mathematical, and Physical Sciences	211	10	50,993	218	8	51,378	187	8	53,614	187	8	58,178
College of Education	77	41	(20,539)	78	43	5,137	72	37	(7,566)	72	37	(15,542)
College of Engineering	134	2	10,130	143	4	13,623	124	2	9,385	124	2	9,005
College of Health and Human Performance	26	8	(7,284)	26	11	(9,128)	24	8	(4,608)	24	8	(11,458)
College of Human Ecology	17	11	(22,436)	17	11	(12,190)	11	4	(11,837)	11	4	(20,123)
College of Journalism	6	1	6,483	5	1	6,614	5	1	7,346	5	1	6,614
College of Library and Information Services	5	0	0	5	0	0	5	0	0	5	0	0
College of Life Sciences	101	11	(39,488)	101	13	(14,739)	90	8	(16,393)	90	8	(15,934)
School of Public Affairs	5	1	2,066	5	1	1,368	5	1	2,066	5	1	1,368
All Academic Groupings	1,021	188	($56,127)	1,040	204	$31,607	914	156	$421	914	156	($34,887)
Not included in totals[b]	19	22		17	26		18	23		18	23	

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Certain groupings were too small to calculate predicted salaries. Other women were not included because their "years since degree" were more than two years outside the range of the men's data for their academic grouping and rank. Finally, certain men's data points were omitted because they were statistical outliers.

Table D-2

Women's Salary Differences, by Rank (Total Group)

Rank	1988 Men N	1988 Women N	1988 Salary Difference	1989 Men N	1989 Women N	1989 Salary Difference
Professor	476	41	$21,485	484	50	$99,280
Associate Professor	353	89	(58,295)[a]	362	91	(57,169)
Assistant Professor	192	58	(19,317)	194	63	(10,504)
All Ranks	1,021	188	($56,127)	1,040	204	$31,607
Not included in totals[b]	19	22		17	26	

Women's Salary Differences, by Rank (Constant Group)

Rank	1988 Men N	1988 Women N	1988 Salary Difference	1989 Men N	1989 Women N	1989 Salary Difference
Professor	442	39	$46,870	442	39	$50,036
Associate Professor	324	77	(34,349)[a]	324	77	(63,034)
Assistant Professor	148	40	(12,100)	148	40	(21,889)
All Ranks	914	156	$421	914	156	($34,887)
Not included in totals[b]	18	23		18	23	

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Certain groupings were too small to calculate predicted salaries. Other women were not included because their "years since degree" were more than two years outside the range of the men's data for their academic grouping and rank. Finally, certain men's data points were omitted because they were statistical outliers.

Table D-3

Average Percentage Women's Salary Differences

Rank	Year				
	1985	1986	1987	1988	1989
Professor	-1.6%	-0.3%	0.3%	0.7%	2.7%
Associate Professor	-0.7	-0.9	-0.3	-1.8	-1.6
Assistant Professor	1.6	2.2	1.0	-0.9	-0.4
All Ranks	-0.3	0.2	0.3	-1.0	-0.2[a]

Note. The percentage salary difference for a woman equals the salary difference divided by the predicted salary. For 1985 and 1986, the average percentage women's salary differences are estimates; these may differ from the exact values by as much as ±0.3%. For 1987, 1988, and 1989, the average percentage women's salary differences are exact values.

[a]See Appendix D for an explanation of this negative percentage salary difference.

Table D-4

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Total Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Differenc
College of Agriculture												
1988	33	0	-	39	3	($1,870)[a]	20	3	$3,557	92	6	$1,687
1989	31	1	$29,996	37	3	(2,187)	18	2	3,843	86	6	31,652
Change 1988-1989	-2	1	29,996	-2	0	-317[b]	-2	-1	286	-6	0	29,965
College of Arts & Humanities												
1988	65	7	$3,608	69	35	(57,241)	32	19	529	166	61	(53,104
1989	67	11	27,271	75	38	(77,842)	29	19	(1,032)	171	68	(51,603
Change 1988-1989	2	4	23,663	6	3	-20,601	-3	0	-1,561	5	7	1,501
College of Behavioral & Social Sciences Excluding Economics												
1988	50	9	(22,631)	36	10	21,671	14	9	7,523	100	23	6,563
1989	51	9	(11,139)	38	12	34,894	14	8	(8,849)	103	29	14,905
Change 1988-1989	1	0	11,492	2	2	13,223	0	-1	-16,372	3	1	8,343
Economics												
1988	13	0	-	9	2	(1,945)	6	1	1,688	28	3	(257
1989	14	0	-	9	2	(2,902)	6	1	(1,162)	29	3	(4,064
Change 1988-1989	1	0	-	0	0	-957	0	0	-2,850	1	0	-3,807

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-4 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Total Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Business & Management												
1988	22	1	($1,402)[a]	15	2	$5,235	16	2	$5,226	53	5	$9,059
1989	22	1	(349)	16	3	(2,094)	15	2	1,096	53	6	(1,347)
Change 1988-1989	0	0	1,053	1	1	-7,329[b]	-1	0	-4,130	0	1	-10,406
College of Computer, Mathematical & Physical Sciences												
Excluding Computer Science												
1988	115	4	35,331	43	4	3,966	16	1	(2,447)	174	9	36,850
1989	122	4	41,255	42	2	(418)	17	1	(2,043)	181	7	38,789
Change 1988-1989	7	0	5,924	-1	-2	-4,384	1	0	399	7	-2	1,939
Computer Science												
1988	11	1	14,143	8	0	-	18	0	-	37	1	14,143
1989	11	1	12,589	8	0	-	18	0	-	37	1	12,589
Change 1988-1989	0	0	-1,554	0	0	-	0	0	-	0	0	-1,554
College of Education												
1988	26	11	(8,689)	41	17	10,380	10	13	(22,230)	77	41	(20,539)
1989	28	12	1,228	41	17	14,169	9	14	(10,260)	78	43	5,137
Change 1988-1989	2	1	9,917	0	0	3,789	-1	1	11,970	1	2	25,676

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-4 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Total Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Engineering												
1988	60	1	$13,743	41	0	-	33	1	($3,613)[a]	134	2	$10,130
1989	62	1	13,527	42	0	-	39	3	96	143	4	13,623
Change 1988-1989	2	0	-216[b]	1	0	-	6	2	3,709	9	2	3,493
College of Health and Human Performance												
1988	8	0	-	11	6	($5,295)	7	2	(1,989)	26	8	(7,284)
1989	8	0	-	11	6	(14,180)	7	5	5,052	26	11	(9,128)
Change 1988-1989	0	0	-	0	0	-8,885	0	3	7,041	0	3	-1,844
College of Human Ecology												
1988	7	2	(16,647)	5	3	1,855	5	6	(7,644)	17	11	(22,436)
1989	6	2	(17,464)	6	4	1,407	5	5	3,867	17	11	(12,190)
Change 1988-1989	-1	0	-817	1	1	-448	0	-1	11,511	0	0	10,246
College of Journalism												
1988	6	1	6,483							6	1	6,483
1989	5	1	6,614							5	1	6,614
Change 1988-1989	-1	0	131							-1	0	131

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-4 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Total Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Library & Information Services												
1988	5	0	-							5	0	-
1989	5	0	-							5	0	-
Change 1988-1989	0	0	-							0	0	-
College of Life Sciences												
1988	50	3	($4,520)[a]	36	7	($35,051)	15	1	$83	101	11	($39,488)
1989	47	6	(5,616)	37	4	(8,016)	17	3	(1,107)	101	13	(14,739)
Change 1988-1989	-3	3	-1,096[b]	1	-3	27,035	2	2	-1,190	0	2	24,749
School of Public Affairs												
1988	5	1	2,066							5	1	2,066
1989	5	1	1,368							5	1	1,368
Change 1988-1989	0	0	-698							0	0	-698
Totals												
1988	476	41	$21,485	353	89	($58,295)	192	58	($19,317)	1,021	188	($56,127)
1989	484	50	99,280	362	91	(57,169)	194	63	(10,504)	1,040	204	31,607
Change 1988-1989	8	9	77,795	9	2	1,126	2	5	8,813	19	16	87,734
Total not analyzed 1988	1	4		7	5		11	13		19	22	
1989	1	4		6	5		10	17		17	26	

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-4 (Cont'd)

Summary of Faculty Not Included in Analysis (Total Group)

Academic Grouping	Groupings Too Small or Outliers						Out of Range in "Years Since Degree"			Total	
	Professor		Associate		Assistant		Professor	Associate	Assistant		
	Men N	Women N	Men N	Women N	Men N	Women N	Women N	Women N	Women N	Men N	Women N
College of Agriculture	-	-	-	-	2	0	-	-	-	2	0
College of Arts & Humanities	-	-	1	0	-	-	-	2	-	1	2
College of Behavorial & Social Sciences Excluding Economics	-	-	1	0	-	-	1	-	1	1	2
College of Business & Management	-	-	-	-	1	0	-	-	-	1	0
College of Computer, Mathematical, & Physical Sciences Excluding Computer Science	-	-	-	-	1	0	-	-	-	1	0
College of Education	-	-	-	-	-	-	-	1	-	0	1
College of Engineering	-	-	-	-	1	0	-	-	-	1	0
College of Human Ecology	-	-	-	-	-	-	2	1	3	0	6
College of Journalism	-	-	2	0	2	4	-	-	-	4	4
College of Library & Information Services	-	-	1	1	0	6	1	-	-	1	8
College of Life Sciences	-	-	-	-	-	-	-	-	1	0	1
School of Architecture	1	0	1	0	1	0	-	-	-	3	0
School of Public Affairs	-	-	-	-	2	2	-	-	-	2	2
Total not included in analysis	1	0	6	1	10	12	4	4	5	17	26

Table D-5

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank (Constant Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Agriculture												
1988	30	0	-	36	3	($2,079)[a]	16	2	$6,033	82	5	$3,954
1989	30	0	-	36	3	(1,322)	16	2	3,739	82	5	2,417
Change 1988-1989			-			757			-2,294[b]			-1,537
College of Arts & Humanities												
1988	61	6	$22,292	63	32	(61,607)	25	15	(5,241)	149	53	(44,556)
1989	61	6	27,635	63	32	(82,113)	25	15	(8,324)	149	53	(62,802)
Change 1988-1989			5,343			-20,506			-3,083			-18,246
College of Behavioral & Social Sciences												
Excluding Economics												
1988	46	8	(20,890)	33	9	20,226	12	5	(476)	91	22	(1,140)
1989	46	8	(24,127)	33	9	22,795	12	5	(3,732)	91	22	(5,064)
Change 1988-1989			-3,237			2,569			-3,256			-3,924
Economics												
1988	12	0	-	8	2	(1,593)	5	0	-	25	2	(1,593)
1989	12	0	-	8	2	1,031	5	0	-	25	2	1,031
Change 1988-1989			-			2,624			-			2,624

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-5 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Constant Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Business & Management												
1988	21	1	($869)[a]	13	2	$8,578	10	2	$4,040	44	5	$11,749
1989	21	1	(200)	13	2	15,704	10	2	2,919	44	5	18,423
Change 1988-1989			669			7,126			-1,121[b]			6,674
College of Computer, Mathematical & Physical Sciences Excluding Computer Science												
1988	108	4	35,669	35	2	3,716	12	1	(2,555)	155	7	36,830
1989	108	4	40,334	35	2	2,895	12	1	(2,181)	155	7	41,048
Change 1988-1989			4,665			-821			374			4,218
Computer Science												
1988	10	1	16,784	7	0	-	15	0	-	32	1	16,784
1989	10	1	17,130	7	0	-	15	0	-	32	1	17,130
Change 1988-1989			346			-			-			346
College of Education												
1988	25	11	(6,836)	39	15	9,180	8	11	(9,910)	72	37	(7,566)
1989	25	11	(6,860)	35	15	3,250	8	11	(11,932)	72	37	(15,542)
Change 1988-1989			-24			-5,930			-2,022			-7,976

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-5 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Constant Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Engineering												
1988	58	1	$13,593	39	0	-	27	1	($4,208)[a]	124	2	$9,385
1989	58	1	13,852	39	0	-	27	1	(5,847)	124	2	8,005
Change 1988-1989			259			-			-1,639[b]			-1,380
College of Health and Human Performance												
1988	8	0	-	11	6	($5,295)	5	2	687	24	8	(4,608)
1989	8	0	-	11	6	(14,180)	5	2	2,722	24	8	(11,458)
Change 1988-1989			-			-8,885			2,035			-6,850
College of Human Ecology												
1988	6	2	(17,267)	5	2	5,430				11	4	(11,837)
1989	6	2	(17,464)	5	2	(2,659)				11	4	(20,123)
Change 1988-1989			-197			-8,089						-3,286
College of Journalism												
1988	5	1	7,346							5	1	7,345
1989	5	1	6,614							5	1	6,614
Change 1988-1989			-732									-732

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-5 (Cont'd)

1988 and 1989 Women's Salary Differences, by Academic Grouping and Rank
(Constant Group)

Academic Grouping	Professor			Associate			Assistant			Total		
	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference	Men N	Women N	Salary Difference
College of Library & Information Services												
1988	5	0	-							5	0	-
1989	5	0	-							5	0	-
Change 1988-1989			-									-
College of Life Sciences												
1988	42	3	($5,018)[a]	35	4	($10,905)	13	1	($470)	90	8	($16,393)
1989	42	3	(8,246)	35	4	(8,435)	13	1	747	90	8	(15,934)
Change 1988-1989			-3,228[b]			2,470			1,217			459
School of Public Affairs												
1988	5	1	2,066							5	1	2,066
1989	5	1	1,368							5	1	1,368
Change 1988-1989			-698									-698
Totals												
1988	442	39	$46,870	324	77	($34,349)	148	40	($12,100)	914	156	$421
1989	442	39	50,036	324	77	(63,034)	148	40	(21,889)	914	156	(34,887)
Change 1988-1989			3,166			-28,685			-9,789			-35,308
Total not analyzed	0	3		5	5		13	15		18	23	

Note. See below for a summary of those faculty not included in the statistical analysis: (1) because academic groupings were too small to calculate predicted salaries, (2) because certain men's data points were statistical outliers, or (3) because "years since degree" for some women were more than two years outside the range of the men's data for their academic grouping and rank.

[a]Parentheses indicate that the total actual salaries for women were larger than the salaries predicted from the men's regression equations.

[b]Minus signs indicate that women's actual salaries became larger in relation to their predicted salaries from 1988 to 1989.

Table D-5 (Cont'd)

Summary of Faculty Not Included in Analysis
(Constant Group)

Academic Grouping	Groupings Too Small or Outliers						Out of Range in "Years Since Degree"			Total	
	Professor		Associate		Assistant		Professor	Associate	Assistant		
	Men N	Women N	Men N	Women N	Men N	Women N	Women N	Women N	Women N	Men N	Women N
College of Agriculture	-	-	-	-	2	0	-	-	-	2	0
College of Arts & Humanities	-	-	1	0	-	-	-	2	-	1	2
College of Behavioral & Social Sciences Excluding Economics	-	-	1	0	-	-	1	-	1	1	2
College of Computer, Mathematical & Physical Sciences Excluding Computer Science	-	-	-	-	1	0	-	-	-	1	0
College of Education	-	-	-	-	-	-	-	1	-	0	1
College of Engineering	-	-	-	-	1	0	-	-	-	1	0
College of Human Ecology	-	-	-	-	4	5	1	1	-	4	7
College of Journalism	-	-	2	0	2	4	-	-	-	4	4
College of Library & Information Services	-	-	0	1	0	4	1	-	-	0	6
College of Life Sciences	-	-	-	-	-	-	-	-	1	0	1
School of Architecture	-	-	1	0	1	0	-	-	-	2	0
School of Public Affairs	-	-	-	-	2	0	-	-	-	2	0
Total faculty not included in analysis	0	0	5	1	13	13	3	4	2	18	23

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